

DICYCLOPENTADIENE

Also known as: Cyclopentadiene dimer

Chemical reference number (CAS): 77-73-6

WHAT IS DICYCLOPENTADIENE?

Dicyclopentadiene is a man-made substance produced by heating crude oil products. It's a colorless, waxy, flammable solid or liquid, with a camphor-like odor. As dicyclopentadiene enters the air, it breaks down quickly into simpler, less-toxic chemicals. However, it can stay unchanged for a long time in soil and in water.

Dicyclopentadiene is not a common ingredient of products used in homes. It is used to make bug sprays, paints, and varnishes. Most dicyclopentadiene in the environment results from industrial processes and from improper waste disposal.

HOW ARE PEOPLE EXPOSED TO DICYCLOPENTADIENE?

Most people are exposed to dicyclopentadiene at work or when the chemical enters the environment.

Drinking/Eating: People may be exposed by drinking contaminated water. People who handle contaminated soil may be exposed when they eat or touch their mouths with dirty hands.

Touching: People may be exposed if they handle the chemical or contaminated soil or water. Although the chemical may irritate the skin, it does not easily pass through the skin.

Breathing: Air may be contaminated near industries where it's used or in places where it is improperly disposed. If home water supplies are contaminated, people could inhale the chemical while washing, bathing or cooking.

DO STANDARDS EXIST FOR REGULATING DICYCLOPENTADIENE?

Water: Currently there are no state or federal drinking water standards for dicyclopentadiene. Until a health-based standard is developed, people should avoid using water that contains any detectable level of dicyclopentadiene for drinking or for preparing food.

If you have very high levels of dicyclopentadiene in your water supply, you should avoid washing, bathing, or using the water for other purposes. Contact your local public health agency for more information about your situation.

Air: No standards exist for the amount of dicyclopentadiene allowed in the air of homes. We use a formula to convert workplace limits to home limits. Based on the formula, we recommend levels of dicyclopentadiene be no higher than 0.1 part per million (ppm) in indoor air. Most people can smell dicyclopentadiene when levels reach 0.003 ppm.

The Wisconsin Department of Natural Resources regulates the amount of dicyclopentadiene that can be released by industries.

WILL EXPOSURE TO DICYCLOPENTADIENE RESULT IN HARMFUL HEALTH EFFECTS?

The following symptoms may occur immediately or shortly after exposure to high levels of dicyclopentadiene in air:

- Irritation of eyes, nose, and throat
- Temporary changes in kidney and lung functions
- Headache and loss of balance
- Convulsions at *very* high levels

The following health effects can occur after several years of exposure to dicyclopentadiene:

Cancer: It is not known if dicyclopentadiene causes cancer.

Reproductive Effects: Animal studies show no evidence of reproductive effects. High level dietary exposure did not increase miscarriages or birth defects in exposed fetuses.

Organ Systems: Kidney, lung, and nervous system damage may occur after exposure to lower levels over a long period of time. Individuals who smoke may be more sensitive than nonsmokers to the effects of dicyclopentadiene on the lungs.

In general, chemicals affect the same organ systems in all people who are exposed. However, the seriousness of the effects may vary from person to person. A person's reaction depends on several things, including individual health, heredity, previous exposure to chemicals including medicines, and personal habits such as smoking or drinking.

It is also important to consider the length of exposure to the chemical; the amount of chemical exposure; and whether the chemical was inhaled, touched, or eaten.

CAN A MEDICAL TEST DETERMINE EXPOSURE TO DICYCLOPENTADIENE?

If you develop symptoms after you've been exposed to dicyclopentadiene, or if you suspect that you may have been exposed to high levels of this chemical, a doctor can use tests of your lungs, kidneys and nervous system to assess possible damage.

Seek medical advice if you have any symptoms that you think may be related to chemical exposure.

This fact sheet summarizes information about this chemical and is not a complete listing of all possible effects. It does not refer to work exposure or emergency situations.

FOR MORE INFORMATION

- Poison Control Center, 800-222-1222
- Your local public health agency
- Division of Public Health, BEOH, 1 West Wilson Street, Rm. 150, Madison, WI 53701-2659, (608) 266-1120 or Internet: <http://dhfs.wisconsin.gov/eh>



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